

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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PATENT NO. : 7,583,760 B2  
APPLICATION NO. : 10/535,479  
ISSUE DATE : September 1, 2009  
INVENTOR(S) : Bernhardsson, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On Page 2, in Field (56), under "OTHER PUBLICATIONS", in Column 2, Line 2, delete "Hybird ARQ" and insert - - Hybrid ARQ - -, therefor.

In Column 1, Line 63, delete "comprising" and insert - - comprising: - -, therefor.

In Column 2, Line 4, delete "signal ;" and insert - - signal; - -, therefor.

In Column 2, Line 42, delete "amplifier" and insert - - amplifier; - -, therefor.

In Column 4, Line 30, delete "comprising" and insert - - comprising: - -, therefor.

In Column 4, Line 56, delete "comprises" and insert - - comprises: - -, therefor.

In Column 5, Line 35, delete "schematic" and insert - - schematically - -, therefor.

In Column 6, Line 53, delete "O-component;" and insert - - Q-component; - -, therefor.

In Column 7, Line 45, delete " $S_{l,m}$ " and insert - -  $s_{l,m}$  - -, therefor.

In Column 7, Line 46, delete " $P(S_{l,m}=il\ r)$ ," and insert - -  $P(s_{l,m}=i|r)$ , - -, therefor.

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In Column 7, Line 47, delete "S<sub>l,m</sub>" and insert - - s<sub>l,m</sub> - -, therefor.

In Column 7, Line 49, delete "S<sub>l,m</sub>" and insert - - s<sub>l,m</sub> - -, therefor.

In Column 7, Line 50, delete "S<sub>l,m</sub>" and insert - - s<sub>l,m</sub> - -, therefor.

In Column 7, Line 53, delete "S<sub>l,m</sub>=0 and S<sub>l,m</sub>=1" and insert - - s<sub>l,m</sub>=0 and s<sub>l,m</sub>=1 - -, therefor.

In Column 7, Line 55, delete "S<sub>l,m</sub>=1 and S<sub>l,m</sub>=0" and insert - - s<sub>l,m</sub>=0 and s<sub>l,m</sub>=1 - -, therefor.

In Column 7, Line 60, delete "P (r|S<sub>l,m</sub>=i)" and insert - - P(r|s<sub>l,m</sub>=i) - -, therefor.

$$P(S_{Lm} = 1) = c \sum_{s_{l,m} \in A_{l,m}} P(r, s_{l,m}) = 0, 1.$$

In Column 7, Line 64, in Equation (2), delete "  
 and insert - - 
$$P\left(r \middle| s_{l,m} = i\right) = c \sum_{s_l \in A_{l,m}} P\left(r \middle| s_{l,m}\right), \quad i = 0, 1. \quad - -, \text{therefor.}$$

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In Column 8, Line 1, delete “ $A_{l,m}=\{S_l|S_{l,m}=i\}$ ” and insert - -  $A_{i,m}=\{S_l|S_{l,m}=i\}$  - -, therefor.

In Column 8, Line 6, delete “ $P(r, S_{l,m}).$ ” and insert - -  $P(r, S_{l,m}).$  - -, therefor.

In Column 8, Lines 11-15, in Equation (3), delete  
 $\max P(r, s_{l,m})$

$$L_{l,m} = \log \frac{s_i \in A_{l,m}}{\max P(r, s_{l,m})} = \log \frac{P(r | \hat{s}_{l,m})}{P(r | \hat{s}_{0,l,m})}$$

“  $s_i \in A_{0,m}$  ” and

$$L_{l,m} = \log \frac{\max_{s_l \in A_{l,m}} P(r, s_{l,m})}{\max_{s_l \in A_{0,m}} P(r, s_{l,m})} = \log \frac{P(r, \hat{s}_{l,m})}{P(r, \hat{s}_{0,l,m})}$$

insert - - - -, therefor.

In Column 8, Line 19, delete “ $\hat{S}_{l,m}, i=0,$ ” and insert - -  $\hat{S}_{i,l,m}, i=0,$  - -, therefor.

In Column 8, Line 22, after “by” delete “the”.

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$$\log \sum_{s \in A_{i,m}} P(r, s) \approx \log \max_{s \in A_{i,m}} P(r, s)$$

In Column 8, Line 26, in Equation (4), delete “ $\log \sum_{s \in A_{i,m}} P(r, s)$ ” and insert - -  $\log \sum_{s \in A_{i,m}} P(r, s) \approx \log \max_{s \in A_{i,m}} P(r, s)$  - -, therefor.

In Column 8, Line 37, delete “ $\sigma_2$ ,” and insert - -  $\sigma^2$ , - -, therefor.

In Column 8, Line 51, delete “ $S_l$ ,” and insert - -  $s_l$ , - -, therefor.

In Column 8, Line 52, delete “ $S_i$ ,” and insert - -  $s_l$ , - -, therefor.

In Column 8, Line 56, delete “ $S_l$ ,” and insert - -  $s_l$ , - -, therefor.

In Column 8, Line 60, delete “ $S_l$ ” and insert - -  $s_l$  - -, therefor.

In Column 8, Line 62, delete “ $S_l$ ” and insert - -  $s_l$  - -, therefor.

In Column 8, Line 63, delete “ $S_l$ ” and insert - -  $s_l$  - -, therefor.

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In Column 8, Line 64, delete "S<sub>l</sub>." and insert - - s<sub>l</sub> - -, therefor.

In Column 9, Line 25, delete "P (S<sub>l,m</sub>=i|r," and insert - - P(s<sub>l,m</sub>=i|r, - -, therefor.

In Column 9, Line 26, delete "S<sub>l,m</sub>=i," and insert - - s<sub>l,m</sub>=i, - -, therefor.

In Column 9, Line 58, delete "WDCMA." and insert - - WCDMA. - -, therefor.

In Column 10, Lines 11-12, delete "w=[w<sub>1</sub> w<sub>2</sub> ... w<sub>N</sub>]" and insert - - w=[w<sub>1</sub> w<sub>2</sub> ... w<sub>N</sub>] - -, therefor.

In Column 10, Line 25, delete "h<sub>r</sub>" and insert - - h<sub>r</sub> - -, therefor.

In Column 10, Line 33, delete "w<sup>H</sup>h<sub>r</sub>" and insert - - w<sup>H</sup>h<sub>r</sub> - -, therefor.

In Column 10, Line 42, in Equation (7), delete "S<sub>j</sub>=g w<sup>H</sup>h<sub>r</sub>S<sub>j</sub>, j=1,..., M." and insert - -  $\hat{S}_j = g w^H h_r S_j, j=1, \dots, M.$  - -, therefor.

In Column 10, Line 46, in Equation (8), delete " $L_{l,m} = K \cdot (|\tilde{r} - s_{0,l,m}|^2 - |\tilde{r} - \tilde{s}_{1,l,m}|^2)$ ," and insert - -  $L_{l,m} = K \cdot (|\tilde{r} - \tilde{s}_{0,l,m}|^2 - |\tilde{r} - \tilde{s}_{1,l,m}|^2)$  - -, therefor.

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In Column 12, Line 3, delete "example" and insert - - example, - -, therefor.

In Column 12, Lines 21-30, delete "If a change in.....in FIG.4." and insert the same in line 22, as a new paragraph.

In Column 13, Line 39, delete "hand." and insert - - hand, - -, therefor.

In Column 13, Lines 50-51, delete "However, other.....the invention." and insert the same in line 49, after "a received sequence." as a continuation of the paragraph.

In Column 13, Line 67, in Claim 1, delete "modules;" and insert - - module; - -, therefor.

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